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ABSTRACT

A case study analyzed the echolalia behavior of an autistic 11-year-old boy, based on recordings made in his home and school. Focus was on the subset of immediate echolalia referred to as pure echoing. Using an approach informed by conversation analysis and descriptive phonetics, distinctions are drawn between different forms of pure echo. It is argued that one of these forms, "unusual echoes," has distinctive interactional and phonetic properties that do not have a counterpart in the speech of non-autistic children. These consist principally of a particular segmental and suprasegmental relationship to the prior adult turn, a particular rhythmic timing and a functional opaqueness. This behavior is set within the context of this child's general communicative behavior, which, in various ways, places a premium on the use of repetition in unusual echoes, although here the interactional and phonetic properties of such repetitions suggest that they display a distinct interactional stance to the questions that precede them. Contains 25 references. (Author/MSE)

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ON BEING ECHOLALIC: AN ANALYSIS OF THE INTERACTIONAL AND PHONETIC ASPECTS OF AN AUTISTIC'S LANGUAGE*

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ON BEING ECHOLALIC: AN ANALYSIS OF THE INTERACTIONAL AND PHONETIC ASPECTS OF AN AUTISTIC'S LANGUAGE*

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1. Preface

A case study is presented of an autistic boy aged 11 years. The analysis is based on audio-visual recordings made in both his home and school. The focus of the study is on that subset of immediate echolalia that has been referred to as pure echoing. Using an approach informed by conversation analysis and descriptive phonetics distinctions are drawn between different forms of pure echo. It is argued that one of these forms, what we call 'unusual echoes', has distinctive interactional and phonetic properties which does not have a counterpart in the speech of non-autistic children. These principally consist of a particular segmental and suprasegmental relationship to the prior adult turn, a particular rhythmic timing and a functional opaqueness. This behaviour is set within the context of this child's general communicative behaviour which, in various ways, places a premium on the use of repetition skills. These skills also inform the child's use of repetition in unusual echoes, though here the interactional and phonetic properties of such

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repetitions suggest that they display a distinct interactional stance to the questions that precede them.

1.1 Introduction

Echolalia refers to the repetition of words that have been used by another speaker. It is a phenomenon that has come to have special associations with autism, partly because it often makes up a high proportion of the early speech of those autistic children who learn to speak. The words that the child echoes need not be produced in the immediate context in which the echo takes place. For example, while at home the autistic child can sometimes repeat jingles that s/he has heard on the television on some prior occasion, or phrases that have been heard at school. This type of echoing is often referred to as 'delayed echoing'. It contrasts with those cases in which the source of the words being repeated is in the immediate context. Usually, in the research literature, such 'immediate echolalia' is taken to include child repetitions which are modelled on the prior turn of the child's interactional partner, or the prior turn but one.

Within the literature on autism echolalia is generally viewed as a symptom of this condition. Frith, for example, describes it as 'amongst the most characteristic behavioural abnormalities of young autistic children.' (1989:123). Yet, as Frith and others have noted, forms of repetition akin to immediate echolalia also occur in the speech of normal children. This raises the question of whether there are differences between these two populations with respect to either the nature or frequency of echo usage. The work of Prizant and Duchan (1981) suggests that autistic children may be packaging a wider variety of actions within immediate echo formats. When taking account of non-verbal behaviour, segmental and suprasegmental features they claim to show that seven different functional action types can be reliably discriminated within the overall set of immediate echoes. However, work on normal children between the ages of about 2;0-3;0, the ages at which repetition is most rife, also suggests that various actions can be achieved through repetition formats (McTear 1978; Casby 1986; Greenfield and Savage-Rumbaugh 1993). It may still be possible that there are differences between the nature of these action types in the

autistic and normal populations, but for several reasons this is less than clear-cut. The most obvious is that different kinds of speech act classifications have been used in studies of normal and autistic populations. In the light of these and other considerations some writers can still claim that there is little difference in the forms of repetition used by normal and autistic children (Rydell and Mirenda, 1991).

In the course of research on autistic echoing further dimensions of variation within echoes have also been identified. Of special importance is the exactness of the repetition, the degree to which the words in the utterance that is the target of the repetition are reproduced. This parameter is of direct relevance to immediate echoes, and in this respect distinctions have been made between three sub-types. First are 'pure echoes', exact repeats of all or some portion of the words used in the prior target turn. Second are 'telegraphic echoes', repeats of words which are not adjacently positioned in the target utterance. Third are 'mitigated echoes', repeats that include some or all words in the target with additional words added. These three subtypes are illustrated below:

```
a. Speaker A: Where is daddy's hat
   Speaker B: Daddy's hat [pure echo]

b.      A: Where is daddy's hat
        B: Where hat [telegraphic echo]

c.      A: Where is daddy's hat
        B: Daddy's hat there [mitigated echo]
```

Within the autistic population it is the prevalence of pure echoes at a certain stage of development that seems to be the clearest potential case of abnormality in the use of repetition. These pure echoes can preserve suprasegmental features of the target utterance as well as segmental ones, thus giving the impression of a speaker who is simply parroting the speech of the other party. Developmentally such pure echoing gives way to more mitigated forms at later ages, and eventually echoing can be virtually eliminated (Roberts,1989).

Although pure echoing is the example *par excellence* of potentially abnormal echoing behaviour it is not possible to be entirely clear about several of its parameters. For example, we do not know whether the

autistic child tends to repeat all the words in the target turn or just some of them. And in the latter case, which undoubtedly occurs some of the time, we do not know which words tend to be picked out for repetition. Their functional properties are somewhat clouded by the fact that their analysis in this respect has usually been combined with the analysis of other kinds of echo, notably mitigated echoes. And, above all, there is still the question as to why this repetition behaviour has the special attraction that it does for the autistic child. To say this, though, is to presume that pure echoes have a special status within the repertoire of the autistic as against the normal child. This, however, is by no means clear. And, if it is the case that the use of pure echoes can serve normal communicative functions among autistic children then we need also to detail the distinctive properties of those that appear abnormal in this regard.

In this study, which is a case study of one autistic child, we will focus principally on the child's pure echoes. We have investigated the different ways in which these echoes can participate in the interaction process, and we attempt to discriminate those that appear to serve a recognisable conversational function from others that seem more equivocal in this regard. In particular we identify a sub-set of pure echoes, ones that we call 'unusual', to which no obvious functional description can be attached. We compare this latter set with comparable instances in studies of normal children so as to decide on whether and in what ways this behaviour is different from potentially analogous behaviour found in normal children. And, in general, we try and situate the child's use of pure echoes within the context of his overall interactional skills and predilections. In this way we arrive at certain conclusions regarding how the child comes to use unusual echoes.

2. The child, the data base and methodological approach

The child, who will be called Kevin, is aged 11 years 4 months at the time when the recordings were made. He lives in England and resides at home with his mother, father and younger sister, attending a school for children with special needs each day. In order to gain an empirical estimation of the degree of Kevin's autism The Childhood Autism Rating Scale (CARS) (Schopler, Reichler, Renner 1986; Schopler,

Reichler, DeVellis and Daly, 1980) was applied to over 4 hours of audio-visual recordings of Kevin made in various settings (see below). The result of this rating was 50.5. CARS score of 37-60.0 is allocated to the diagnostic category 'Autistic' and given the descriptive label 'Severe Autism' (Schopler et al, 1986: 57).

Audio-visual recordings were made of this child in a number of different settings. One hour 45 minutes of recording took place in the child's home. Relevant equipment, such as a tripod mounted camera, was made available, and instruction given as to its use. All the recordings were made in the absence of any research worker. The 105 minutes of recording are made up of six sections recorded over two days. They include sections in which Kevin is playing with his younger sister, looking at books with his mother, watching TV with relatives, singing songs with his father and just sitting with his mother and father in the context of no special activity. The other setting in which recordings took place was his school where the recordings were orchestrated by our research assistant. Here we have about 2 hours involving Kevin in an open classroom situation, in various kinds of group work with other children and teachers. In addition, three types of one-to-one session were recorded in the school: a) a 10 minute session between Kevin and a teacher which focussed on word recognition and the assembling of word cards into simple sentences; b) a 14 minute session in which Kevin's mother played a board game with him; and c) 43 minutes in which our research assistant engaged in interaction with Kevin in the context of drawing activity and a large doll's house. For reasons that will be later touched on the various one to one sessions both at home and at school were those that yielded most of the speech on which our analysis focuses.

Table 1 gives an overview of the main forms of speech employed by Kevin on our recordings. The main type of speech excluded from this table is delayed echolalia, speech which did not appear to be addressed to other people with some specific communicative intent and which usually consisted of recognisable reworkings of forms of talk that he had heard on some other occasion. This is excluded from the table partly because it would prove difficult to segment this talk into discrete utterances for the purposes of quantification, and partly because its true extent is difficult to capture from our recordings, especially in the open

classroom situation. Very roughly, Kevin's delayed echoing would make up at least as much of his talk as does the category 'Other forms of response to vocal initiation' in Table 1. In addition we have excluded from Table 1 such things as singing and words he says to himself as he is sorting word cards into sentences.

Types of child vocalisation	N	(%)
Vocal initiations	9	(5)
Pure echoes	47	(25)
Mitigated echoes	8	(4)
Telegraphic echoes	0	(0)
Other forms of response to vocal initiation by interlocutor	124	(66)

Table 1. Distribution of Kevin's communicative talk aggregated across a variety of settings.

Our definition of 'pure echoes' is stricter than that generally employed in the literature. It is confined to Kevin's turns which consist exclusively of exact segmental repeats of all or some of the words used in the prior target utterance. The Table conveys very well Kevin's low level of dialogic initiation with other people. Apart from his delayed echolalia most of his talk takes the form of replies to questions. This is true of the various echoes in Table 1 as well as the category labelled 'other forms of response to verbal initiation'. In the main he speaks to others only when spoken to.

Psychometric information about Kevin is not available. It is also difficult to make an informed judgement as to his level of language development on the basis of his vocal output, principally because, as is evident from Table 1, his speech production consists mainly of responses to various kinds of question, which on average fall between 1 - 2 words in length (the mode is 1 word). Both mitigated and pure echoes are always responses to questions, as well as the 'other forms of response' speech. The most advanced of his few vocal initiations is Can I have a crisp please, though we have no means of knowing whether he

has control over the syntax involved in the production of such sentences. However, his delayed echolalic speech is generally more complex than that contained in Table 1: here, average utterance length appeared to be between 4 - 5 words. Furthermore, in his one-to-one session with his class teacher he is able to construct, with word cards, sentences like 'daddy and mummy play ball' and 'daddy make tea for me'.

Our approach to the analysis of the data extracts that form the core of this paper is one that is principally informed by work in conversation analysis (Levinson, 1983; Wootton, 1989). This approach insists on the examination of linguistic and other communicative behaviour within its local sequential context of production, and seeks inductively to show how the participants, through the details of their behaviour, adopt particular interactional alignments. Such an approach is, therefore, especially concerned with the sequential position that an utterance occupies, the details of that utterance design (and any co-occurring non-verbal behaviour) and the way in which an utterance is treated by the next speaker. Through the evidence that arises from these details we attempt to construct an analysis that is compatible with the implicit understandings of the participants as they go about their interactional business.

The data fragments are given in a modified form of conventional orthography. Where appropriate for analytic purposes, these are supplemented with impressionistic phonetic information. Segmental information is presented in square brackets following orthographic versions (if such are possible), and pitch information is presented syllable by syllable beneath the relevant turn in inter-linear format where the ruler lines are indicative or top and bottom of the speaker's pitch-range. Certain other conventions are adopted from conversation analysis transcription procedures (Atkinson and Heritage, 1984). These comprise the procedures for depicting speech overlap; the use of '=' to signify no gap between speakers or within the speech of a single speaker; where no pitch transcription is given we use '?' to indicate a general rising pitch contour over a turn (all other turns have general falling pitch); the use of double brackets to enclose transcriber comment; the use of colons to mark sound sustension; (hh) to signify audible aspiration within speech and (he) to signal laughter or

chuckling. Timings of pauses are given in seconds; (.) indicates a pause of under half a second.

3. General interactional profile

By contrast with normal children the most striking feature about Kevin's verbal behaviour concerns what is absent rather than what is present. Unlike normal children (Snow 1986) he rarely initiates interaction with other people, a pattern that seems as true for his behaviour in his own home as it is for that at school, and a pattern that is characteristic of autistic children more generally (Fay 1988). During free moments at school, for example, he seems content to wander around the classroom, not seeking out contact with other children or staff members, occasionally stopping to look at things, but for the most part absorbed by matters which do not involve direct dealings with other people. His verbal output at such times is made up largely of delayed echolalia; during the recordings this type of talk mainly focuses on regulatory themes. For example, a recurrent utterance frame, both at home as well as at school, is <u>You do not</u>.., articulated with the exaggerated forms of intonation characteristic of an adult reprimanding a child. Typically these utterances are produced on a much higher or lower pitch, and more loudly, than surrounding talk. They exhibit noticeable whispery-voiced phonation and syllable-timing and are often done with dynamic pitch rises on all syllables but the last. Their overall articulatory setting is noticeably tenser than other utterances.

The very infrequent forms of vocal initiation, making up just 5% of his overall vocal output recorded in Table 1, consist exclusively of requests for goods or for the adult to perform an action for him. Sometimes such requests, though still infrequent, can be accomplished in entirely non-verbal ways, as when he takes his mother's hand and moves it towards his back in order to get her to scratch it. When enacted vocally these requests display distinctive articulatory and prosodic characteristics, especially in contrast to the articulatory and prosodic forms that are used to package the remainder of his vocal output. They are produced relatively high in pitch with wide pitch range; any on-syllable pitch movements are likely to be accompanied by noticeable vibrato. The articulatory components are produced laxly and obscurely,

the main impressionistic percept being one of overall nasality running through the utterance. These turns also exhibit considerable variations in tempo. Typically they begin slow, accelerate noticeably and slow down. Taken together these phonetic characteristics yield a markedly 'strange' tenor to the speech produced. Kevin's co-interactants orient to the obscurity of utterance and variability of tempo in their talk which responds to these vocal initiations. These features are illustrated in the extract below:

Fragment (1)

Kevin and his mother sit together on the settee at home looking out of the window. His mother looks towards him, but does not speak. Two seconds later he turns to his mother and says, whilst she is still looking at him:

K: [ʔmə̃ˑɪ (inbreath) ʷʊ̤ɾ̤ɡ̤ʷə̤ʔp tʃɹːʰɒ̤kˈ ɔʔtʰmɪɹːʔh]=

((touches M's upper arm))

M: =Talk slowly Kev [in

K: [ʔmə̃wɪ̤ˈwɒ̤ntʰˈʊˈə̤ ck ɔtʰˈbɪɪːʔ]

((still touches M's arm))

M: You can have a rice cake later

(1.0)

M: When you've had some dinner

One type of initiation that seems to be entirely absent is that concerned with identifying the names of people or things. Such initiations are commonly enough reported in the literature on normal children, particularly in the kinds of context that frequently occur on our recordings, such as book reading (Ninio and Bruner 1978). In the

literature on autism there is some suggestion that the vocal/gestural forms associated with such referential activity are more grossly retarded than, say, those forms associated with the act of requesting (Sigman, Mundy, Sherman and Ungerer 1986; Baron-Cohen 1989). But with respect to pointing, one key ingredient of these referential forms, there is evidence in Kevin's case that he can use this action, together with appropriate vocal accompaniment, to engage in acts of reference. Where he displays this proficiency, however, is in response to questions which seek such a response from him rather than in acts of initiation.

Although the classification of questions that is employed in Table 2 is a fairly crude one it nevertheless suffices to show that the large majority of adult questions to which Kevin gives a non-echoing response are eliciting from him the name of things or persons. Typically these questions take forms like 'What's that?', 'Who is that?', 'Its not a snail its a ?', 'What colour is it?'. For the most part (i.e. 57% of them) they elicit names of things that he can actually see in his surroundings, and such namings are frequently accompanied by points on his part.

Types of information	N	(%)
Visible person/object descriptors	70	(57)
Remote/non visible person/object descriptors	16	(13)
Location descriptions	5	(4)
Course of action information	30	(24)
Other	3	(2)

Table 2. Types of information sought by Kevin's interlocutor in questions which received non-echoing forms of response.

There is ample evidence, therefore, that even though Kevin does not engage in initiating acts of labelling he does, nevertheless, have a wide experience and secure grasp of the labelling game when in response position. In most cases, as in those just discussed in the context of Table 2, when he replies to a question he produces a word that has not been used in the question, he replies in a non-echolalic way. Among the instances of pure echoes, however, there is also evidence of an

orientation to and grasp of such a labelling game. Furthermore, the techniques through which such an orientation is displayed suggest that the child has developed quite sophisticated discourse skills in his management of this game.

4. Repetition skills

In this section we will identify various ways in which those who interact with Kevin employ forms of turn design which encourage the use of repetition on his part. In a strict definitional sense his resultant repetitions are often pure echoes, as will be evident from the extracts we use by way of illustration. However, most of these repetitions, by contrast with those we deal with in later sections, appear in no way misfitted for the sequential positions in which they occur, and in most cases they are treated by the child's interlocutor as appropriate moves in the current language game. We begin this discussion by exploring these matters in labelling sequences, ones in which the child is being asked to name something. In assisting the child in his identification of the name in question we shall see that the other party can resort to providing names that the child then goes on to copy.

An important general feature of interaction between Kevin and other people is that when they ask him questions he usually does not, initially, give a vocal response. For example, if we take the same questions that form the basis for Table 2, questions that elicited non-echoing forms of response from Kevin, we find that 61% of them occur after at least one prior unsuccessful attempt by his interlocutor to elicit a response to some version of that same question. Indeed, in many cases there are several such prior attempts to elicit a response (e.g. see fragments 3, 5, 8, 9, 11 and 14 below). And this pattern does not seem to be a simple function of the possible difficulty of the question. Questions which seek labels concerning visible objects or persons, perhaps the most straightforward type of question, are preceded by prior unsuccessful elicitation attempts in 60% of cases. If non-response is one type of contingency with which the other party has to deal, a further contingency is that in which the child produces an incorrect response to the question. Most of the questions addressed to him, especially labelling questions, are, of course, test questions, ones for which the

other party knows the answer. So the other party can also be placed in the position of guiding Kevin towards the correct answer.

In the context of labelling questions both the contingencies mentioned above, non-response and incorrect response, can be resolved by the other party providing Kevin with a version of the answer that they have been seeking in their question. In fragment (2) his mother says Its jam, while in fragment (3) she says No its a watering can.

Fragment (2)

Kevin and his mother sitting side by side on the settee at home looking at a book. Kevin begins by correctly identifying a picture of a cake, in response to a question from his mother.

K: Cake

M: A cake with

(1.2)

M: What's this (pointing to, and prodding, a place on the page))

(1.2)

M: It's ja:m

K: (Pudding)

(1.0)

M: So there's ja m in the ca:ke

Fragment (3) In same context as fragment (2) above:

M: What is it ((pointing to book))

(1.9)

M: Its a w:: [ɪtsˈəwː ʍˈ]

(0.7)

M: W- [ŵ̰ fi]

(1.1)

K: [ˈpˈɛxɣɪkˈöfi]

M: No its a wa:tering ca:n [ˈwːɑːtʰəɹˠɛŋˈkʰæːn]

K: Watering can [ˈwɔ̰ːtʰəɹˈɪŋˈkʰa͡ɪ̯n]

M: What dd you do with the watering can?

In then producing a repeat of this label in next position, Jam in fragment (2) and Watering can in fragment (3), Kevin is taking this sequential opportunity to produce a first [for him] correct version of the label that the parent has been attempting to elicit from him.In producing this version, then, he is displaying his recognition that this is the appropriate answer. In addition, and as a slight variant of this,

Kevin has another way of constructing such repetitions which displays an even closer monitoring of this type of assisting turn.

Fragment (4) In same context as fragment (2) above:

M: What are they ((pointing to book))

K: Berries [ˈbɛːɹ̥i z̥ˈ]((also points briefly to place on page))

M: They're like berries=they're called

(1.1)

M: What are they called

(1.0)

M: They're s::tra:[:w b e r r] i es: (.) aren't they

K: [Strawb'ries] [ˈtɹ̥ɹ̥ɔ:bɹ̥ɪz̥]
((no point))

(1.6)

M: S:tra:wb'ries (.) Ye::s

In extracts like fragment (4) he is able to detect from the early part of the word that is produced by the other party, in this case strawberries, what that word is going to be. Indeed, in fragment (4) Kevin also completes the word prior to the completion of the word by his mother. In extracts like (4) the other party can subsequently display some doubt

as to the child's grasp of the label in question. In fragment (4) Kevin's mother goes on to say Aren't they (1.6) Strawberries (.) yes, this re-exposure of the child to the correct label perhaps being sensitive to the overlapping position of the child's turn. But in the more frequent cases like fragments (2) and (3) above there is no evidence of these child repetitions being in any way treated as problematic, as displaying some unsound grasp of the language game in question.

A further way in which Kevin can adopt a target word being offered by the adult occurs in circumstances in which the adult offers the child a clue as to the nature of the word being sought. The clue consists of the beginning of the word that the adult is seeking, and such a clue is offered when it has become clear that the child is having difficulty in coming up with the word on his own. In fragment (5), for example, the mother's initial question is answered incorrectly by Kevin, and he is not able to offer an alternative person in response to either of her follow up turns. In this circumstance the mother offers the clue/prompt Aa [ɑ̃:n], which Kevin then manages to complete with tie Sherry [ʔɪj'ɕɛʊ̯ë] [i.e. 'Auntie Sherry'].

Fragment (5) Mother and Kevin sitting on the settee at home; mother holds a cup in her right hand and has her left arm around Kevin's shoulders, in an affectionate gesture:

```
M:   Who's coming to see you
     ____________________
     _  _ _  _ \  \
     ____________________

          (1.4)
M:   Who's coming to see you ((stroking back of Kevin's
                                neck))
     ____________________
     _  _ \  _ _  \
     ____________________

          (1.7)

M:   Aun [ ɑ̃n: ]
     _____
     _
     _____

          (0.8)
K:   tie Sherry [ʔɪj'ɕɛʊ̯ë]
     _____
     _ \
     _____

M:   Auntie Sherry (.) A::nd?
     ____________________
     _ _ /    _
     ____________________
```


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Similarly, in fragment (6) the child is able to recognise the word that his mother is seeking, 'caterpillar', from her production of the initial voiceless velar plosive of that word. Notice that like the 'Auntie Sherry' instance the child's production of the target word is built as a completion of the prior turn - that is the initial portion is not produced in the child's version.

Fragment (6) Mother playing a board game with Kevin in a side room off his classroom at school. Our research assistant is also present. The game involves throwing a dice, which has pictures on its sides. Here his mother encourages Kevin to tell her what the picture is on the exposed side of the dice:

M: Look at the picture what is it=

((initially touches his fingers, then points to the dice face in her other hand))

K: =[sɪʔ ɪˈsˈnɛːɹˈɔɤ] ((briefly points to the dice))

M: Suh not a snail its ak [ɪtsɔˈkːʰ]

(1.0)

K: ((obscure quiet)) [kʰɑ̟ɤ̆]

M: its a [ʔɪtsɔ]?

((K briefly points to dice))

(0.7)

K: Leaf [lɔi̯ːʔ]= ((no point))

```
→  M:   =it's ak [ ˈtsɔʔkʰəʔ ]
        ———————
        —  —
        ———————

→  K:   Caterpillar [ ˈaɪˈʰɔpʰɪlˈɔ ]  ((no point))
        ———————
        ~ ~ ~ \
        ———————

   M:   Caterpillar right what have you got to do
        ——————————————————————————————————————
        — — \ _ — — — — _ \
        ——————————————————————————————————————
```

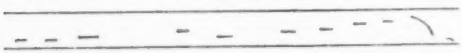
In these various ways, therefore, the child exhibits some skill in monitoring the prior turn of the other party for material that directly cues what is expected of him in his next turn. Routinely, where a label is being elicited the child can look to the prior turn of the parent for a sense of what that label is to be, and in many circumstances, as we have seen, that will be a successful strategy in that it appears to generate a label that is commensurate with the immediate sequential requirements. Labelling games of this kind are important by virtue of their frequency within our corpus of data, but they are not the only ones in which such repetition strategies are fostered. Two further types are now discussed.

The first is a type of game that is frequently played with Kevin by both his mother and younger sister on our recordings. The game, always initiated by the other party, consists of presenting Kevin with two options and asking him which of these options he would prefer:

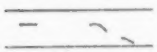
Fragment (7) Kevin sitting on the settee at home between his mother and father. Engaged in a playful game in which he is presented with alternatives that he chooses from. The game is already underway when the transcript begins:

```
M:   D'ye wa::n (uh::m) smacked bottom or a kiss?
     ——————————————————————————————————————————
     — — — — — ⌒ \ / \
     ——————————————————————————————————————————

K:   Kiss
     ————
     /
     ————
     ((takes his finger out of his mouth at beginning of this
       utterance, smiles during it and then angles his cheek
       to be kissed))

     ((M kisses K's cheek))

          (1.6)
```

M: D'you wa::nt (.) a smacked bottom or a tickle



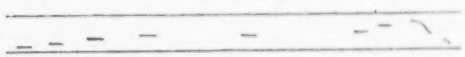
K: Smacked bottom ((smiles during this utterance))



((M playfully smacks his legs, accompanied by laughter from K and F))

(1.7)

M: Do you wa:nt a: (1.2) ki:ss:: (.) or a tickle



((K's laughter continues through this utterance))

K: Kiss

((turns his head towards M, for kissing, at end of this word))

Presumably, one feature which makes the game attractive from the point of view of his interactional partner is that it seems to work. It generates serious signs of recognition that Kevin understands the options in question, an understanding displayed partly, perhaps, through his systematic avoidance of certain options, notably being tickled, and through the laughter and horseplay in the course of the game's enactment. Our interest is particularly in the way in which the options are presented. They are both explicitly mentioned by the other party, and characteristically Kevin chooses between the options by repeating the name of that which he prefers. The fact that he does not always select the second of the options with which he is presented is important for later arguments. For now we emphasise that his grasp of the options in question is not just suggested by the considerations above, but also in the minutiae of his non-verbal behaviour: when choosing kiss, for example, his presentation of his cheek for kissing displays an expectation that this will now take place. In these ways his choice of an

option is bound up with more than labelling a possibility, it earmarks a course of action that he now expects to take place.

The second interactional tactic with which we will be concerned is also typically used in circumstances in which the other party is seeking guidance from Kevin as to some next course of action. We have already noted that Kevin's co-interactant is often faced with a situation in which no response is made to a question. One course of action that the other party can then use in these circumstances is to transform the question into a yes or no alternative.

Fragment (8) K sitting on settee between his mother and father.

```
M:    D'you want to go to bed?=

K:    =[ˈsːʔ ˈsʰ· ˈsʰ·  [ˈs ˈs ˈs ˈsˈ] ((then inclines his head more
                         [                                  to M))
M:                       [Kevin  (.)   Kevi::n

                        (0.7)

M:    Kevin

                   (1.3)

M:    Kevin listen (.) [look at me
                       [((puts her hand to K's chin at
                       [  beginning of this
                       [  turn,and directs his face
                       [  towards her))
                       [
K:                     [ ˈsˠ ˈsˠ ˈs ʸˈsˠ ]

                   (0.7)

M:    Look at me d'you want to go to be [d
      ((K pushes her hand away from his  [
        chin after word 'me'))           [
                                         [
K:                                       [ ˈtsʲ ˈsʲ ˈsˠ ]
                                          ((then he looks
                                            away from M))

                   (2.0)
      ((M takes hold of his chin and redirects his face
        towards her))

*  M:  Yes or no

                   (1.1)

*  K:  Yes [ ʷʔjɔsˠ ]((as he says this he pulls his chin
                       from her and looks away))

   M:  Ye:s? (.) Are you tired
```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So, in fragment (8), after eliciting nothing other than intermittent voiceless alveolar fricative sounds from Kevin regarding her enquiry as to whether or not he wants to go to bed, his mother eventually formulates the question as Yes or no?. Such a formulation makes it possible for Kevin to answer the original question by picking one or other of the two alternatives, and he responds to this by saying Yes. Here again, then, we find forms of turn design being used by other parties which provide a word that the child can use in coming up with an answer to a question. Indeed, such turn designs might be attractive precisely because they offer such a ready facility to the child.

In his speech with others, therefore, Kevin is mainly concerned with responding to questions, and in the course of this, and in a number of ways, his co-participants offer within their own talk words that Kevin can draw on in constructing a response. In this sense, the availability of repetition to Kevin as a discourse strategy is built into, and fostered, through the turn designs of those he interacts with. And these turn designs are particularly found in circumstances in which the child has not responded or has responded inaccurately. Here, therefore, there is the potential for repetition, as a strategy, to have a particular significance for the child in resolving communication disorder of one kind or another. But its use, as we have seen, is not exclusive to such contexts. In fragment (7), for example, the possibility for repetition to be a viable response is built into the design of turns that are not officially designed to handle a communication problem, and there are other discourse contexts within our data corpus where such is the case. For example, when his teacher asks him to assemble word cards in order to make a sentence she gives him the cards and then vocally models the sentence that he is to make. His job is to reproduce that model, and as he tries to do this he will often say to himself the words that the teacher has used. Here again, as in most of the extracts above, there is little sense of the child's use of repetition being out of kilter with the task in hand. But there are some pure echoes where this is not the case, and it is these which will principally occupy us in subsequent sections.

5. Inapposite repetition

In a formal sense many of Kevin's repetitions that we have discussed in the previous section are pure echoes, consisting exclusively of exact segmental repetitions of all or part of a prior adult turn. In the main they appear to be accepted as appropriate conversational moves by the child's co-participant, and in some cases, such as fragment (7) there is good supporting evidence that the child's grasp of the functional role of the repetition is congruent with that of the co-participant. In other cases, however, there might remain doubt as to the kind of understanding displayed through the child's repetition even though the co-participant accepts the child's act as an appropriately fitted conversational move. For example, in fragment (5) it is possible that although the parent is successful in prompting the label 'Auntie Sherry' it may not be the case that Kevin recognises that Auntie Sherry will be coming around later that day. The parent's prompt may simply serve to select one of a number of person descriptors available to the child. And in fragment (8) there is no supporting evidence suggesting that Kevin himself understands that his Yes amounts to an interest in going to bed: for example, on saying this he does not make any physical move which would be consistent with such an understanding.

This kind of semantic/pragmatic insecurity is often tied up with the possibility that at times the child may be operating with a different kind of language game than his recipient. This possibility is concealed, and must remain uncertain, within cases like fragment (5) because the answer that the parent is seeking, 'Auntie Sherry', may also be an answer to an alternative language game that the child might be playing - that of simply guessing which person his mother is referring to. Such a possibility is, however, more clearly realised in other instances like fragment (9) below:

Fragment (9) Kevin sitting on the settee at home between his mother and father. The earlier part of this sequence is transcribed in fragment (13). As the sequence below begins he is sitting with his finger in his mouth, looking frontwards, not at M or F:

```
M:    Kevin look at my poor cheek
      ──────────────────────────
      ~ _ _ _ ~ ~
      ──────────────────────────

      ((at the beginning of this turn she touches K's
        shoulder, then uses that hand to point to her
                                              cheek))

            (0.9)    ((K stills his movements here, but
                                  does not look at M))

M:    Kevin look at my poor che[ek
                               [
      ─ _ _ _ _ ~ ~
      ──────────────────────────
                               [
                               [((initially M touches K's
                               [hand, which is still in his
                               [mouth, then points to her
                               [cheek))
K:                             [Cheek [ tʃiʔk ]
                                      ──────
                                       ~
                                      ──────
        ((turns to look at M, and moves hand from mouth))
          K smiles and points at cheek))

M:    Look   ((pointing again at her cheek))
      ──────
       ~
      ──────
```

Here Kevin's mother is attempting to establish a connection between a mark/stain on Kevin's trousers and some offence that Kevin has committed at an earlier date, an offence which involved his biting her cheek. After initial difficulties in gaining a response from him, and remedial action in the form of touching his hand, Kevin eventually looks at her when she says Look at my poor cheek, words that he can see are also accompanied by a point by her to her own cheek. Kevin's response is to point to her cheek and say Cheek; in fact his production of this word begins prior to his mother's completion of the word Cheek. The fact that he also points to the cheek, that this action is accompanied by a smile and that he just repeats the word 'cheek' (rather than, for example, 'poor cheek') suggests that Kevin's understanding of the sequential expectation obtaining here is for him simply to label the

parent's cheek. Just after our transcript ends, once he has become aware of the earlier offence connotations being addressed by his mother and father, his facial demeanour radically changes; pleasure gives way to intense seriousness. And his mother's response to his production of cheek in fragment 9 itself also treats it as misfitted for its sequential position. Her follow up, look, uttered whilst he is already looking at the cheek in question, is clearly attempting to obtain a recognition of the bite related aspect of the cheek.

In this, and other cases, therefore, there is a basis for supposing that the procedure that generates a pure echo on the child's part, the language game that he is playing, can be orderly, though discrepant with that of his co-participant. In fact such discrepancies can appear not just in situations where he produces echoes, they can also be a feature of exchanges in which he produces forms of non-echoing response. For example, in fragment (10) he produces the label Sun in response to his mother's question Listen what have you got to do?, a response that is understandably treated as misfitted to this question by his mother, who reposes it subsequent to his response:

Fragment (10) Mother and Kevin playing the board game at his school: see fragment (6) above for description of the game. Mother is holding the dice, which has a picture of the sun on the top:

M: Kevin what do you (.) have to do

K: ((looks away, then says)) [s'p͡ɪʊ'ɪŋ']

M: Kevin listen

(0.7)

→ M: Listen (.) What have you got to do
((she taps his hand at word listen, then points to top of dice: K's gaze goes to dice))

→ K: Sun ['sɔ̃n̆] ((and he points to top of dice))

M: You've got to:?

Here, as in fragment (9), Kevin's labelling response appears to be cued by the fact that when he turns to monitor his mother's action she is pointing to the focal object in question. His labelling, therefore, arises out of non-verbally influenced understandings of the prior turn of the adult.

6. Unusual repetition

To this point we have outlined two types of pure echo. In both of these the child's repetition represents a move in a recognisable language game, even though in the second type, just dealt with, such a move is misfitted for the sequential environment in which it takes place. Within Kevin's corpus of pure echoes there remains a further subset that does not fall easily into either of these two categories. This consists of echoes for which a functional description is much more elusive, ones that do not appear to amount to moves in recognisable language games. Indeed, for this reason it may seem somewhat questionable to treat them, as we have done in Table 1, as communicative actions that are commensurate in this respect with the other forms of pure echo. Leaving this issue aside for the moment our initial strategy will be to illustrate this sub-type with two clear examples of it, and then to draw out from these and other examples some general properties of what seem to be these more unusual and puzzling forms of repetition.

The two initial fragments with which we will be concerned in this section are (11) and (12) below:

Fragment (11) Kevin and his mother are in the same board game activity as fragments (6) and (10) above. As this sequence begins M is holding the dice and its container in her hand and K is looking away, towards the camera:

M: Whose turn is it [hʊzˈtʰɐ̯ːnɪzᵛˈɐʔpˋ]

((then M adjusts cards on the table between them, and K looks at the table))

(1.5)

M: Whose turn is it [hʊ ˈzˈtʰɔːnɐzᵛˈçʔ t͡ˈ]

((M manually indicates to table))

(1.5) ((Near end of pause K looks away))

M: Whose turn is it [ˈhʊˈzˈtʰˈːɔːnˈɪzᶦˈɪʔ t͡ʰ]

K: ((begins to reach for container M is holding))

(.)

K: Turn is it [ˈtʰɐ̯ːnɪzˈɪtʰ]((looking at M's face))

M: Whose turn is it

((withdrawing her hand that holds container))

K: Kevin's turn

((his hand now flat on table, not reaching for container, now looking at table))

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Fragment (12) In the same context as fragment (9) above, in fact in the sequence preceding that extract. Kevin has been closely inspecting, and pointing to, one knee of his trousers; as he does this he says quietly, in a tuneful rhythmic way, Doing that doing that on (.) purpose doing that:

M: Do what on purpose

((K then leans back and half looks towards M))

(0.7)

M: Yes you are doing that on purpose

M: you're making a hole aren't you

((as M says this she moves K's hands away from his knee))

K: Doing a hole doing a hole (in it?)

[ˈɖɔʊ̃ɲʊˈɦɰ̃ˀ ɖʷu ˈɨnɐˈhɔʊ̃nʒ]

(.)

M: Look ((brief point by M to knee of trousers))

(1.4)

M: Who did that

((sustained point to K's knee))

K: Who did th- [ˈɜ̃ʊ̃ɖˈɦɜ̃]

((moving his head back sharply))

(.)

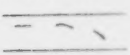
M: K [evin

K: [Who did that [ˈhɔʊ ɖɪɖäˀ]

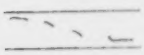
((said as his head comes 'back' to its level position))

(.)

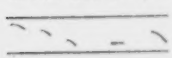
M: Who did it



K: Kevins did it



M: Kevin did it yes



When we speak of these instances as being 'puzzling' we refer in part to the ways in which they are treated by the adult involved. In both these and the other cases in this subset the adult responds to Kevin's pure echoes by reposing the target turn to which the echo was a response. The child's echo is not officially being credited with meaning by the child's co-participant, and in this sense is posing a puzzle to them as well as to the analyst. This way of responding to the child's echoes contrasts with the responses to pure echoes in fragments (2) and (3), that have been previously discussed. But this is only one aspect of their puzzling nature, for we have also seen that some earlier forms of echo are treated similarly by the adult (in fragments (9) and (10)). What makes the echoes in (11) and (12) especially puzzling is that, by contrast with those in (9) and (10), they do not seem to be clear-cut moves in any recognisable language game. This claim needs spelling out a little more, particularly in the light of the analysis of echoes, described earlier, carried out by Prizant and Duchan (1981).

Take fragment (11) above. Here, at the time at which Kevin produces his echo Turn is it, there is direct evidence of a co-occurring hand movement, a right hand reach to take the shaker that is being proffered by his mother, and there is evidence of Kevin orienting to his mother by looking at her. These features should assist in assigning this overall echo configuration into one of the various functional categories outlined by Prizant and Duchan. Yet in various ways this remains a slippery exercise. For example, it could fulfil their criteria for being a

request, for being a 'yes' answer to his mother's question or even for being a self-regulatory remark that accompanies his reach. The reaching for the object, for example, could be taken as an affirmation of the fact that he wants it, or it could be taken as evidence of his desire to obtain it. Such matters seem deeply opaque in such instances. Furthermore, it remains a possibility that the child's reach is not strictly connected with the utterance that comes to accompany it. His reach movement begins immediately on the production of his mother's turn, while his Turn is it, together with his gaze switch towards her, is initiated only after she has said the remaining words. So Kevin's overall action configuration could be generated by initially embarking on a course of action, taking the shaker, and then speaking and orienting to his mother on finding himself to be the recipient of her question. In some ways the continuing assuredness of his take attempt and the uncertainty expressed through his continuing gaze at her also speak to such a possibility. Even greater uncertainty features in fragment (12). This time there are no accompanying gestures nor any gaze toward the adult. Kevin's Who did that simply seems to repeat back the adult question, with no obvious indicator of any particular kind of communicative intent.

Therefore, the subset of pure echoes with which we are dealing here has puzzling features both from the point of view of the adult responder and from the point of view of the analyst attempting to engage in functional description. We now turn to describing some typical features of this type of echo.

There are three properties of this sub-group of pure echoes which will be addressed. First their segmental correspondence to the model that they are echoing, second their intonational correspondence to this model and third their timing in relation to this model. By segmental correspondence we refer to the fact that the child includes in his echo all the words that occurred in the target/model turn after the initial word that begins the echo. So, in fragment (11) the child could have echoed by saying just 'turn', or by producing a telegraphic version such as 'turn it'. In fact, he produces all the words which occurred in the parental model after his initial word, 'turn' i.e. Turn is it. This is an important feature because we have seen that some of Kevin's echoes can consist of just repeats of non turn final words that are present in the model, notably in fragments (7) and (8). The only exception to this pattern of

word inclusion within the present subset of pure echoes is one instance in which Kevin drops an address term that the parent has used in the original model (i.e. the parent says <u>What is it Kevin?</u> and Kevin replies <u>What is it?</u>). From a segmental phonetic point of view, too, these echoes show quite remarkable attentiveness to the articulatory characteristics of the model. Fragment (11) above and (13) below exemplify this close segmental matching. For example, in fragment (11) Kevin's mother's three versions of 'turn is it' are noticeably different in the <u>is it</u> portions. The first is [ɪz̪ˈʏë?pˈ], the second [ëzʏˈe̞?t̪ˈ], the third is [ɪzʲɪˈʔ tʲʰ]. The vocalic portions of Kevin's production [ɪzʲɪtʲʰ] have the qualities of his mother's third, rather than first or second version, and the final consonantal portion displays the same front resonance, apicality and aspiration (not noticeable in mother's first two versions) as the immediately preceding version. Similarly, Kevin's echo production of the word <u>boat</u> in fragment (13) shows striking similarities to the preceding adult model rather than to his own prior non-echoed production of the same word:

Fragment (13) Kevin and his mother sitting side by side on the settee at home looking at a book:

M: oh: what's this (0.1) Kevin (0.1) what is it'

K: it's a boat [bö̤ʊ̤ ʔtʲʰ]

M: boat [bʌʊ̤tʲʰ](.) yes (0.2) what's the boat on

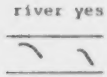
M: (0.4) where's the boat on (0.2) Kevin (.) Kevin (.)

M: oo oo what's the boat on

(0.1)

K: river

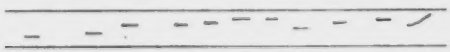
M: river yes



(0.2)

K: (coughs)

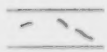
M: would you like to go for a ride in the boat [bʲəʊtʲʲ]



K: boat [bʲəʊ ʔtʲʲ]

(.)

M: yes or no



We can notice here that Kevin's first production of boat is segmentally different from his mother's in a number of respects. The vocalic portion of Kevin's production has noticeably creaky phonation and begins relatively closer and more rounded than does his mother's; it also finishes noticeably fronter and more open. The syllable coda has co-ordinate glottal closure with the final apical gesture whilst his mother's version does not. The consonantal release of Kevin's production is also noticeably fronter in resonance than that of his mother. Compare this with the phonetics of Kevin's echo which is produced with a vocalic portion and consonantal release which closely match those of his mother's immediately preceding production.

The second property of our subset is the marked tempo, rhythmic and pitch similarity between the echo of the child and that portion of the adult target that is being echoed. Figure 1 below pictures the F0 contours for the relevant parts of fragment (11) (frequency is represented

in Hz on the vertical logarithmic axis, time in seconds is represented on the horizontal axis):

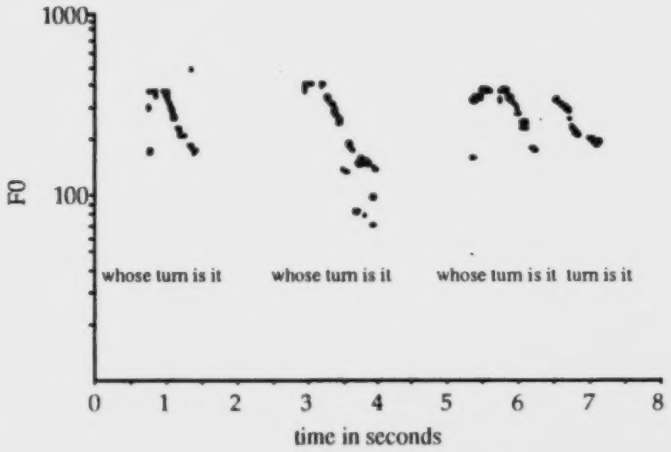


Figure 1 Extracted F0 contours from fragment (11)

We are particularly interested here in the relationship of Kevin's echo 'turn is it' to his mother's third version. There is a close matching of pitch and pitch contour shape (in terms of start and end point; mother's turn is it starts at about 350Hz and falls to around 180Hz; Kevin's begins at about 340Hz and falls to 220H) The durational and rhythmic characteristics of Kevin's turn also model very closely those of his mother's third version. His mother's third version is noticeably slower than the preceding two. The first version has a duration of 835ms with 'turn is it' occupying 572ms The second version has a total duration of 840ms with 'turn is it' occupying 586ms. The third version is 1.22 secs long with the 'turn is it' portion occupying 858ms. Kevin's echoed version of 'turn is it' closely matches this with a duration of 845ms.

Frequency and durational similarities can also be observed in Kevin's repeated version of 'boat' in fragment (13). Extracted F0 contours for the relevant part of this fragment are given in Figure 2 below:

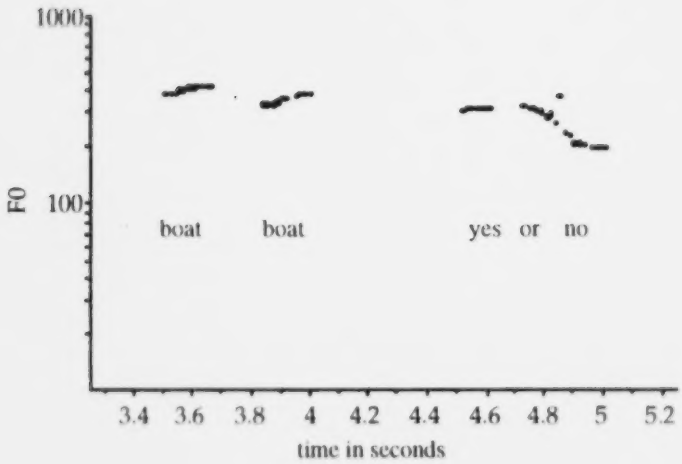


Figure 2 Extracted F0 contours from fragment (13)

Here again there are striking similarities between the pitch configurations of his mother's production of 'boat' and Kevin's version. Both are stepped up rises with initial and final level portions. His mother's production begins at approximately 380 and rises to around 420Hz. Kevin's version starts around 336Hz and terminates around 390Hz. They are also extremely closely matched in terms of their durations: Kevin's lasts 170ms and his mother's lasts 174ms.

In the present data there is at least one instance, in fragment (12), in which the child, on finding his initial echo not being commensurate in these terms with that of the target, redoes the echo so as to produce a version which more closely resembles it. Figure 3 below presents the F0 details for this instance:

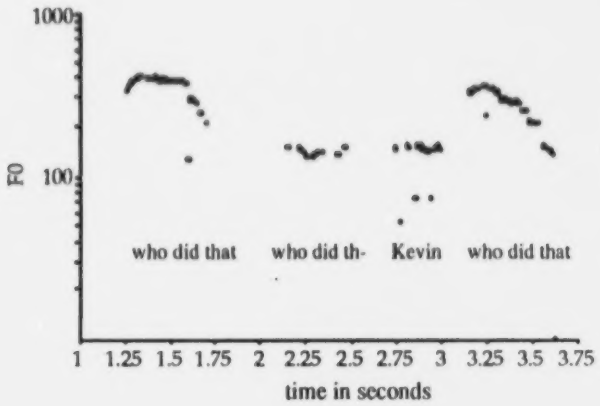


Figure 3 Extracted F0 contours from fragment 12

The child's first production of who did that is done with relatively low level pitch (some 200Hz lower than the starting frequency of his mother's production) which falls slightly towards the end of his utterance (to around 140Hz). It is a quiet, obscurely produced, truncated form of his mother's version. Compare this with his second version which is clearly audible and closely matches the contour and frequency of his mother's version. Mother's version rises from around 330Hz to a peak of 400Hz and falls to around 220Hz. Kevin's second version rises from a starting frequency of around 330Hz to a peak of some 350Hz and falls to about 140Hz. This second version is also more closely matched in terms of duration than his first. His mother's first production lasts some 420ms. Kevin's first version is some 160 ms shorter than this while his second version is 440ms.

It is important to recognise that this phonetic matching is not uniformly found across all instances of repetition produced by Kevin. There are a number of examples where lexically repeated material can be produced with quite different pitch characteristics. The extracted fundamental contours from fragment (2) provide an illustration of this.

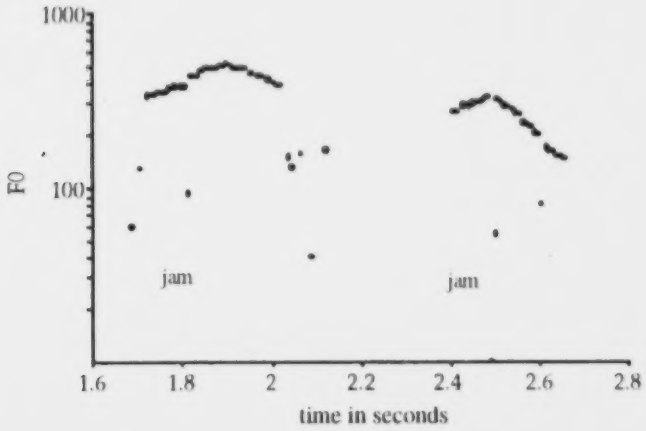


Figure 4 Extracted F0 contours from fragment (2)

Here the mother's and the child's productions are noticeably different. The child's version of 'jam' exhibits a marked fall in frequency towards the end while the mother's does not drop below its starting frequency. The child's version reaches its frequency peak proportionately sooner than the mother's version and shows proportionately less difference in frequency between its starting point and peak. (Mother's version starts around 330Hz rises to 500Hz in some 160ms and falls to 390Hz in 123ms. Kevin's version begins at about 270Hz, rises to its peak of around 320Hz in 57ms and then falls to its end at about 140Hz in 171ms. The amplitude contours of these utterances are different too. In mother's the amplitude peak is skewed towards the middle and end of the utterance. In Kevin's utterance the peak occurs early, closely aligned with the pitch peak, and rapidly falls away thereafter.) The overall duration of the two versions is not matched in the way it is for the 'unusual echoes'. Mother's version lasts 375ms while Kevin's lasts 240ms.

The third feature referred to above concerns those cases where the echo occurs immediately after the adult's target utterance. In this,

the normal case, the onset of the echo is routinely rhythmically more rapid

than would be expected from the tempo and pattern of rhythm established in the model, a feature which also differentiates this type of echo from several of those discussed earlier in the paper. Couper-Kuhlen (1989, 1990) and Couper-Kuhlen and Auer (1988) provide an innovative and persuasive discussion of such rhythmic organisation in talk. They have shown that turns at talk can be 'contextualised' in terms of their interactional functioning by virtue of their rhythmic constitution and their relationship to the rhythmic patternings in surrounding talk. They demonstrate that if rhythmic isochrony is carefully distinguished from prosodic word stress it is possible to gain an understanding of the kinds of interactional work which can be accomplished by the rhythmic alignment and non-alignment of turns at talk in normal adult speech. This work, based on a substantial amount of natural conversational material, shows that while syllable stress is important for establishing the 'beat of interactional speech rhythm' (1988:4) not all stressed syllables in talk contribute to the perception of rhythmic isochrony. It demonstrates that it is crucially the organisation of talk into isochronous/anisochronous chains, rather than the simple stress patterns of sequences of words which serves to contextualise interactional function. In discussing the rhythmic organisation of question-answer sequences, for instance, Couper-Kuhlen and Auer (1988) observe that:

> 'fillers and vocalisations are not alone indicative of a conversational 'hitch' or, as has been sometimes claimed, of a 'dispreferred' second pair-part. Instead whether or not they are integrated into a larger rhythmic structure seems to affect their conversational function significantly.' (10).

The following two fragments (11') and (13') provide instances of the rhythmic non-integration of the 'unusual repetitions' produced by Kevin.

Fragment (11')

```
M:   Whose /'turn is it
           (1.5)
M:   Whose /'turn is it
           (1.5)
M:   Whose /'turn is it
           (.)
→ K:  'Turn //is it
M:   Whose /'turn is it
K:   /'Kevin's turn
```

The symbol '/' is used to indicate where the rhythmic beat is located; ' indicates prosodic syllable stress.

In Mother's first two turns it so happens that syllable stress and rhythmic beat coincide. In her third turn the rhythmic beat falls in the same place and further reinforces the regular rhythmic pattern established by her first two turns. The stressed syllable 'turn' in Kevin's next utterance, however, is not aligned with this established rhythmic pattern but comes in early. The place where the expected beat would fall is indicated by the symbol '//'. It can be seen that it coincides with the unstressed syllable 'is'. This creates a noticeable anisochronous relationship of Kevin's production with that of his mother's preceding turn. The same phenomenon is evidenced in fragment (13')

Fragment (13')

```
M:   would you /'like to /'go for a /'ride in the
     /'boat
→ K:  'boat //
      (.)
M:   /'yes or no
```

In this fragment the organisation of Mother's turn is such that the rhythmic beats fall on 'like', 'go', 'ride' and 'boat'. Kevin's turn 'boat', which redoes the final word of his mother's preceding utterance, is not fitted to this rhythmic pattern but again comes in early so that the next beat occurs after the word rather than coincident with its beginning.

When the three kinds of features we have just described combine they give these echoes both a parasitic and autonomic feel. They, like most of the echoes we have been discussing in this paper, are produced in sequential positions in which the child is being required to produce a next turn, but they appear to be occupying that turn simply by repeating a portion of what the adult has said. When these three features are present in the context of single word echoes then, even though the word selected for repetition by the child could amount to an answer to the question, they are routinely treated by the adult as empty and non-meaningful. Nor can the analyst, in such cases, find any basis for supposing that the child has any grasp of the question in hand. Fragments (14) and (15) below illustrate this pattern:

Fragment (14) Kevin sitting on the settee at home, between his mother and father. He has his one arm round his mother's neck; his other hand is holding M's hand throughout the sequence below. His mother has asked him Who do you love?, and Kevin first replies Mummy, then Daddy in response to Who else?. In response to a further Who else? he says Kevin:

M: Kevin ye:(he):s? we know you love Kevin?

M: (.) Who else

(1.4)

M: What about Lucy

(.)

M: Love Lucy=

K: =Lucy (ləʊdɪj)

(0.6)

F: Is she asle[ep? (.) Lucy? ((to M))

M: [What about Lucy ((to K)) (.) No she's

M: reading ((to F))

F: Oh

M: What about Lucy ((to K))

(0.8)

M: D'you love Lucy? ((to K))

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Fragment (15) Follows on shortly after fragment (5) above. Kevin and his mother sitting on their settee at home discussing people who might be going to visit them: throughout M is rubbing the back of K's neck with her hand:

M: And ma:ybe:? (.) Ca: :rl a:s we:ll
K: ([ ])
(.)
M: D'you want to see Ca:rl
— — — — ⌒
K: Carl [ŋˈɑʰ]
⌒
M: Mmmm?=d'you want to play with Carl
(0.7)
K: ([ ])
M: Mm?

Although this child is capable of saying 'yes' he does so very infrequently, and some have argued that autistics have special difficulty in engaging in such affirmation (Fay 1988). So, in fragment (14), for example, given this it would be possible for the word 'Lucy' to be an answer to Love Lucy?. But presumably the presence of the three features mentioned above in Kevin's Lucy leads his mother not to treat his answer as representing his views on this matter: she reposes the question to him by saying What about Lucy do you love Lucy?.

There are two further observations that we want to make at this stage about these unusual echoes. The first is that they often do not seem to be associated with questions which are difficult to understand, or ones for which it is difficult to come up with an answer. Notwithstanding experimental work which has shown that autistics are more likely to use echoes after questions that are beyond their understanding (e.g.Paccia and Cursio,1982), there seems nevertheless, in our data, extensive evidence that these unusual echoes are not contingent on the question being ungraspable by the child. This evidence consists of the fact that when the adult reposes the same question to the child

after the child's echo then the child often comes up with an answer that is treated as a candidate answer by the adult. In fragment (11) Kevin replies by saying Kevin's turn, and in fragment (12) Kevin's did it. If the question were ungraspable by the child then we might expect to find the child continuing to echo after the adult reposes the question. Importantly, there is one instance of this occurring in our data, so this is a tactic available as a communicative option to the child. But although it is available it only occurs the once. In most cases the child is able to construct an acceptable reply to the reposed question.

Our second, and final, observation in this section concerns the sequential position in which these unusual echoes tend to occur. The observation is that they appear to have a special affinity with the initial stages of any particular line of questioning by the adult. Where they occur they tend to occur as the *first* kind of vocal response that Kevin makes. Logically it would be possible for them to occur in a variety of sequential positions, as do various of those pure echoes discussed in previous sections. For example, after the adult has asked a question and the child has given an initial incorrect response then if the adult reposes the question (e.g. 'No its not an x, what is it?') it would then be possible for the child to produce what we have called an unusual echo, a repeat of the question or some part of it. In practice, however, unusual echoes do not appear in such sequential positions. They are ways of repeating which appear to have their use as a first way of dealing with a question. They are, of course, not the only way of initially dealing with a question. Much more common within these data is non-response on the part of the child. But where they do occur these unusual echoes are usually the first vocal form of response that the child makes to the question.

Before moving on to draw together the various threads of our discussion, with a view to characterising the work achieved through unusual echoes, we first of all want to consider whether it is a distinctive subtype not just in comparison with the earlier types of pure echo that we have discussed but also in comparison with the uses that normal children make of repetition.

7. Repetition in normal children

Within the age range of about 1;6 - 3;0 there is a good deal of repetition within the speech of normal children. Several studies have now shown that turns formatted as repetitions can perform a variety of interactional roles (Casby,1986; McTear,1978). Some of these clearly parallel forms of repetition that we have found in Kevin's data. For example, the use by Kevin of kiss in fragment (7) and Yes in fragment (8) as ways of answering a question follow patterns that are frequent among normal children. The latter can also produce repetitions of what adults say in turns which do not follow overt adult questions. They may choose, for example, to imitate a word that has just been produced by the adult. For example, Casby's (1986) analysis of the talk of one child revealed that 'imitations' made up between 38-49% of all the child's repetitive utterances at MLU stages I-III (using Brown's (1973) criteria for identifying such stages). From the examples of imitation that he provides, like the one reproduced below, it is clear that the child may use the provision of a label by the adult as an occasion for then reproducing this label, either for a first time or with a view to constructing an improved version on their own last try:

Fragment (16) From Casby (1986:136). Mother and child engaged in book reading activity:

M: What's this?
C: [bʌlaɪ]
M: Butterfly, right.
C: Butter-fly

This kind of imitative repetition is clearly analogous to forms of repetition that we have found in Kevin's data, notably Jam in fragment (2) and Watering can in fragment (3), and it also informs the more inapposite uses like that of Cheek in fragment (9). Further parallel data among normal children can be found in the more delicate analysis of the language games involved in such situations which is reported in Tarplee (1993). Casby notes (*op cit*:131) that those child utterances he classified as imitative were often intonationally similar to the adult model. This is to be expected in that the child's aim is to produce a version of a word

which is similar to that just produced by the adult. Likewise, within our data on Kevin, we have found a tendency for such imitative repetition to be intonationally similar to the target of the repetition (as in fragments (2), (3) and (9)). All in all, therefore, it seems that many of Kevin's pure echoes that we have discussed have their functional counterparts in the language use of young normal children.

What we have described as unusual echoes are answers to questions which do not appear to play a part in any recognisable language game. So, a matter of interest is whether there are counterparts to these echoes in studies of normal children. In order to examine this we will briefly discuss two studies which have examined in some detail particular normal children who have employed repetition as an answering device. Steffensen (1978) describes the answering strategies of two children, one of whom (Jackson), in the age range 1;8 - 2;2 and in the context of yes/no questions, uses repetition rather than 'yes' as a technique of affirmation even though he, like Kevin, is capable of using the negative and affirmative particles. Although such repetitions are often used by Jackson in what Steffensen refers to as semantically well formed ways, ways that are appropriately fitted to the question and which display that the child has some genuine grasp of it, in some cases (such as fragment (17)) this is not so. Steffensen sees such answers as 'responding by formula', as just imitations rather than genuine affirmations, especially when viewed in the light of accompanying nonverbal behaviour:

Fragment (17) From Steffensen (1978:228). Adult and child [Jackson, aged 2;0.7] talk about cutting meat:

A: Shall I cut your meat?
J: Meat
A: Shall I cut it?

Steffensen's discussion of this child strongly suggests that at a certain stage of development some normal children may resort to using repetition in ways that have some similarities to Kevin's use of unusual echoes. But there are also important actual and possible differences between Jackson and Kevin in this respect. According to Steffensen, a feature of Jackson's repetitions is that they are intonationally different

from their models, and in the examples provided by Steffensen there are no cases of the child repeating longer stretches of the question than just a potential answer constituent. Furthermore, there is no discussion of whether, as is the case in Kevin's data (see fragments (11) and (12) above), such repetition answering strategies are also found in response to 'Wh' questions.

A study by McTear (1978) of repetition in his own child between the ages of 2;6-3;1 clearly shows a child who not only produces repetitions of Wh questions but also ones which appear often to include the Wh word itself. An example from McTear is given below:

Fragment (18) From McTear (1978:305): F denotes father, S denotes his daughter who is aged somewhere between 2;6 - 3;1. Presumably, they are talking about what they can see on a television:

```
F: What are they doing?
S: What they doing?
F: They're playing snooker
      ((a few minutes previously S had asked the
      question and received this information))
```

For a variety of reasons, however, these child turns do not seem to us to operate in ways analogous to Kevin's unusual echoes. McTear's argument is that these repetitions are not general answering devices but are specific to particular types of question, what he calls 'display questions'. These are questions in which 'the speaker already knows the answer and wants the hearer to show whether he knows it or not' (*op cit*:302). For McTear the repetition of such questions is a device used by the child to display that she is attending, but one which also intentionally transfers the speaker role back to the questioner. The way that adults are described as replying to these questions supports this contention in that the adult can, after the child's repeat, supply the answer (as in fragment (18)), or the adult can treat the child as deliberately choosing not to answer by insisting on an answer. For example, McTear cites the child's grandmother as responding to such a repeat by saying Come on you tell me (*op cit*:305). Kevin's unusual echoes are never treated in these ways by his co-participant, nor is there

ever any clear evidence that for Kevin himself these forms of repetition are designed as speaker switching devices. Furthermore, Kevin's unusual echoes are not specific to particular question types, nor are they, in the main, full repetitions of the prior question. For these various reasons it seems to us that this kind of repetition found in the speech of McTear's daughter is serving a different interactional role than that performed by Kevin's unusual echoes.

8. Discussion

In this article we have been principally concerned with the pure echoes of one autistic boy. Within this relatively unambiguous set of vocalisations we have distinguished three subsets; those which are used in communicatively appropriate ways; those which, though inapposite, represent systematic moves in some language game; and those we have described as 'unusual', that do not amount to moves in any recognisable and conventional language game. We have not quantified these various subsets because their membership is not always clear-cut. For example, our discussion of fragments (5) and (8) has suggested various grounds for uncertainty concerning the kind of understanding that informs Kevin's production of pure echoes in these sequences. Nevertheless, working with what seem to us canonical cases we have tried to identify ways in which these various types are both used by Kevin and responded to by those who interact with him. In doing this we have been especially concerned with the possibly distinctive status of what we have called 'unusual' echoes.

Unusual echoes have a number of features which suggest that they are simply constructed as repetitions of what the adult has said. These features are their segmental and suprasegmental relationship to the model, their unusual rhythmic timing and their functional opaqueness. We have shown, for example, that these unusual echoes appear to be more acoustically matched to their models than is the case for those pure echoes which represent appropriate moves in language games, and that at a segmental level they systematically, and selectively, preserve particular portions of the model. By virtue of these features these unusual echoes impressionistically sound like 'empty' repetition, and are treated as such by the adult. There are, as we have seen in the case of

Steffensen's Jackson, occasional glimpses of somewhat similar behaviour among normal children around the developmental age of about 2;0. But in Kevin's data this type of echo is more intonationally parasitic on the model, not necessarily confined to repeating particular segments of the model and probably more widely used in response to different types of question. As far as we can tell, therefore, unusual echoes do not have counterparts in the speech of normal children.

In developing a characterisation of the role that unusual echoes play in the repertoire of this autistic child it seems to us important to consider them in the context of his more general pattern of interactional skills and involvements. Crucially, vocalisations that are clearly intended as communicative are solicited from Kevin: under 5% of these communicative vocalisations amount to initiations on his part. His world of spontaneous talk is largely made up of 'delayed echolalia', utterances which are usually recognisable as being authored (Goffman,1979) by other people in other contexts, and ones for which he displays an ongoing, obsessive attachment. It is this domain of language use in which Kevin seems most fluent and at home. And insofar as he rarely displays any continuing and sustained (obsessive) involvement with other people in any particular line of interaction, as evidenced by his gaze, manual behaviour and general bodily orientation, then it seems to be the topics of his delayed echolalia that stand at the forefront of his immediate vocal, and perhaps mental, life.

In these circumstances attempts to elicit responses, communicative speech, from Kevin face the twin tasks of both bringing him out of that separate world and having him understand the import of the adult initiation in question. That the first of these is a problem for those who interact with Kevin is suggested by the frequency with which he appears not to respond to adult initiations, not just in sequences in which echoes occur, but also in those where he eventually makes what is taken to be an appropriate communicative response. The continuing relevance of these considerations routinely occasions various unusual, though for this kind of interaction routine, forms of behaviour on the part of the child's interactional partner - things like emphatic voice, a high frequency in the use of his name as a summons, and physically taking hold of his body so as to encourage orientation to the partner. In the literature more prominence has been given to the second task mentioned

above for the adult who attempts to solicit speech from the autistic child, the problem of having the child grasp the linguistic content. Here various research has drawn attention especially to pragmatic and conceptual limitations that make it difficult for the child to understand the nature of what is said to him (Fay, 1988). While this may be so we have argued that this is of limited significance for explaining the occurrence of unusual echoes. The main reason for this is that in many of these sequences, such as fragments (11) and (13), the child seems capable of eventually coming up with an appropriate response to the adult question. Furthermore, it may be important to bear in mind that when asking the child such questions, those who know the child well, such as his mother or a teacher, are unlikely to ask him questions that they know or suspect he is not able to answer, let alone repeat such questions after he produces an unusual echo in response. The key question then, as we see it, is why the child produces such an echo when he has the cognitive equipment to come up with a response?

The answer as to why he chooses to echo seems fairly straightforward. We have seen that the child possesses quite sophisticated skills associated with repetition and that constructing a reply out of material contained in the prior turn is frequently a successful discourse strategy for him in his dealings with other people. And in various ways the design of adult turns, especially in repair sequences after non-response by Kevin, relies on and fosters repetition skills. These points seem to be true not just for the most frequent sequences involving the labelling of things but also in other sequence types such as the games he plays at home. Repetition is thus the obvious device for the child to pick, his most skilled device, in situations which are not conducive to him being able to deal appropriately with an adult question, the situations that seem characteristic of 'unusual' repetition. Much more difficult to specify are the properties of this kind of situation. The best clue here is the fact that 'unusual' repetition is a *first* vocal response to any particular question. It occurs in that temporal phase when the child's attention is being drawn into the world of question and answer. By frequently not answering at all the child evades entry into this world; through 'unusual' echoes the child accords significance to what the adult has said simply

by repeating it, by, in effect, saying that this is all he is willing or able to do.

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